

WHAT IS CLAIMED IS:

1. A method of manufacturing a heat-resistant ceramic core with a three-dimensional shape used to cast a hollow
5 flow passage inside by precision casting, comprising:

a powder lamination shaping step for forming a ceramic core with the three-dimensional shape from resin-covered ceramic powder;

an impregnation step for impregnating ceramics
10 reinforcing liquid into the formed ceramic core; and

a sintering step for sintering the impregnated ceramic core to strengthen the heat resistance thereof.

2. The method of manufacturing the heat-resistant
15 ceramic core with a three-dimensional shape specified in claim 1,

wherein the said ceramics reinforcing liquid comprises colloidal silica, silica precursor, alumina sol, yttrium oxide sol, niobium oxide sol, or zirconia sol.

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3. The method of manufacturing the heat-resistant ceramic core with a three-dimensional shape specified in claim 1,

wherein the impregnated ceramic core is placed in
25 heat-resistant powder, which prevents the impregnated ceramic core from deforming, and the said core is heated

together with the heat-resistant powder.

4. A cast product produced by using the ceramic core based on the method specified in any of claims 1 through 3.